

# User's Manual



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## User's Manual

Thank you for choosing this Green Power series power supply unit (PSU)! Please read this manual carefully and follow its instructions before installation.

Green power series power supply complies with Intel ATX12V Version 2.3 specifications. It includes a 6 pin PCIe connector for high-end graphic card and 4+4 pin connector (500W&550W) for Dual Core CPU and Multi Core CPU. Dual +12V rails deliver safer and more reliable output to your system. The standby mode consumes less than 1W when +5VSB is less than 0.1A. It saves more energy and your money. In addition we've included a variety of industrial-grade protective circuitry: OCP (Over Current Protection), OPP (Over Power Protection), OVP (Over Voltage Protection), SCP (Short Circuit Protection).

We would like to draw your attention to the conditions that your system works best for you without failing. To avoid such failures and to increase lifetime of your entire system, we suggest you to make sure that:

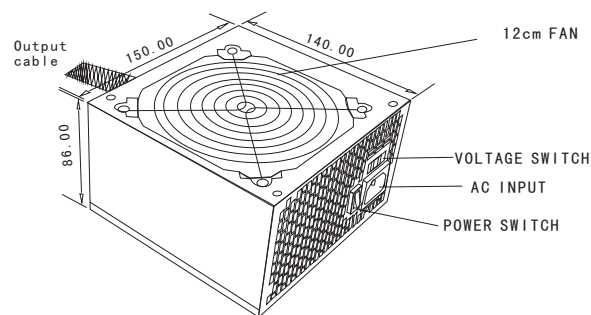
- .Your PC or server is not located near a radiator or any other heat producing device
- .Your PC or server is not located near a magnetic device
- .Your PC or server is not located in a moist or dusty or vibrating environment
- .Your PC or server is not exposed to direct sunshine
- .Your PC or server must be work at stable input AC voltage

### Chapter A: Features

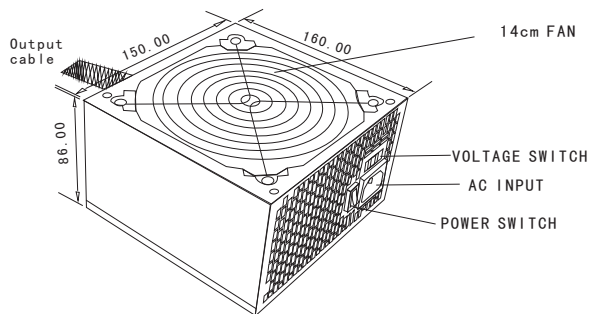
- .Complies with Intel ATX12V V2.3

- .80% high efficient performance at typical load operation.
- .Ultra low acoustic noise ( $\leq 25\text{dB}$ )
- .SLI Ready and supports Intel & AMD Dual Core CPUs and Multi Core CPUs
- .The standby mode consumes less than 1W when +5VSB is less than 0.1A.
- .Higher reliability and built-in protection circuit OCP, OVP, OLP, SCP and line input fuse protection.
- .6 pin PCIe provides more power for graphic card
- .4+4 pin connector for Dual Core CPU and Multi Core CPU
- .FAN speed auto-controlled by thermal sensor in the side of power supply
- .100% Hi-pot and burn-in test
- .MTBF: 100,000 hours at 25°C

To make sure you connect your power supply properly, please check your main board and graphics card manuals for compatibility before connecting the power supply to any of your devices.



Dimension: 150×86×140 mm (W×H×L) 12cm Fan

**GREEN POWER****GREEN POWER**

Dimension: 150×86×160 mm (W×H×L) 14cm Fan

### Chapter B: Installation

1. Turn off your computer; unplug the power cord from your old power supply.
2. Open your computer case following your case manual.
3. Disconnect all PSU connectors from the motherboard and the peripherals, such as cooler, HDD, DVD, CDR, FDD, etc.
4. Remove the old power supply from your computer case and install your new power supply.
5. Connect the 20+4 pin main power connector to your motherboard.  
**Note:** Use the separated 20 pin if your motherboard requires 20 pin power connector.
6. Connect the Serial-ATA connectors to the peripherals.
7. Connect the peripheral 4 pin power connectors if you are still using IDE hard drives or optical drives.
8. Connect the PCI EXPRESS power connector to your PCI EXPRESS graphic card.

9. Connect your cooler to the regular 4 pin peripheral connectors if you have.
10. Close your computer case and connect the AC power cord to the power supply.

### Chapter C: Booting the system

1. Main power connector (24 pin configuration) is properly connected
2. CPU +12V power connector (4 or 4+4 pin configuration) is properly connected
3. PCIe connector (if required by GPU) is properly connected
4. All other needed connectors are properly connected  
*Incorrect insertion might cause your PC unable to boot and some components might even be damaged!*
5. AC cord is properly connected to wall plug and power supply AC inlet
6. Then close your computer chassis
7. Turn on the power supply by setting the I/O switch to "I" position; your system is ready to go.
8. You can turn on your PC now by pushing power button on your PC case!

### Chapter D: Specification

#### 1.0 AC input voltage

Parameter	Minimum	Nominal	Maximum	Unit
V <sub>in</sub> (115VAC)	90	115	132	VRMS
V <sub>in</sub> (230VAC)	180	230	264	VRMS
V <sub>in</sub> Frequency	47	—	63	Hz

## 1.1 DC output voltage regulation

Output	Range	Min.	Nom.	Max.	Unit
+12V1DC	±5%	+11.4	+12.00	+12.60	Volts
+12V2DC	±5%	+11.4	+12.00	+12.60	Volts
+5VDC	±5%	+4.75	+5.00	+5.25	Volts
+3.3VDC	±5%	+3.14	+3.30	+3.47	Volts
-12VDC	±10%	-10.80	-12.00	-13.20	Volts
+5VSB	±5%	+4.75	+5.00	+5.25	Volts

## 2.1 DC output power distribution

## Green Power 400

Voltage	+3.3V	+5V	+12V1	+12V2	-12V	+5VSB
Max. load	20.0A	14.0A	14.0A	13.0A	0.3A	2.5A
Min. load	0.5A	0.3A	1.0A	1.0A	0.0A	0.0A

+3.3V&amp;+5V total output not exceed 120W

Output watt: 300W

Max. Output Capacity: 400W

## Green Power 450

Voltage	+3.3V	+5V	+12V1	+12V2	-12V	+5VSB
Max. load	22.0A	15.0A	14.0A	16.0A	0.3A	2.5A
Min. load	0.5A	0.3A	1.0A	1.0A	0.0A	0.0A

+3.3V&amp;+5V total output not exceed 130W

Output watt: 350W

Max. Output Capacity: 450W

## Green Power 500

Voltage	+3.3V	+5V	+12V1	+12V2	-12V	+5VSB
Max. load	24.0A	17.0A	16.0A	18.0A	0.5A	2.5A
Min. load	0.5A	0.3A	1.0A	1.0A	0.0A	0.0A

+3.3V&amp;+5V total output not exceed 130W

Output watt: 400W

Max. Output Capacity: 500W

## Green Power 550

Voltage	+3.3V	+5V	+12V1	+12V2	-12V	+5VSB
Max. load	25.0A	20.0A	16.0A	18.0A	0.5A	2.5A
Min. load	0.3A	0.5A	1.0A	1.0A	0.0A	0.0A

+3.3V&amp;+5V total output not exceed 130W

Output watt: 450W

Max. Output Capacity: 550W

## 2.2 Output Ripple &amp; Noise

	+3.3V	+5V	+12V1,2,	-12V	+5VSB
Ripple & Noise	50mVp-p	50mVp-p	120mVp-p	120mVp-p	50mVp-p

## 2.3 Output Protection

If the power supply is latch into shutdown stage (when OCP ,OVP or short protection is working ),the power supply shall return to normal operation only after the fault has been removed and remote signal must reset for a minimum of 1 second (or the AC removed for 10 second) . Then, it will turn on again.

### 2.3.1 Over Voltage Protection (OVP)

In case of over voltage limits are exceeded, the power supply shall provide latch-mode over-voltage protection.

### 2.3.2 Short Circuit Protection (SCP)

An output short circuit is defined as any output impedance of less than 0.1 ohms. The power supply shall shut down and latch off for shorting all output to GND.

### 2.3.3 Over Current Protection (OCP)

Overload currents are applied to each tested output rail. If the current limits are exceeded, the power supply shall shutdown and latch off.

If you have any questions or need any supports, please contact your reseller, the nearest Huntkey agent or Huntkey headquarter service center.